MANDATORY CONTINUING EDUCATION IN NURSING:
A TEXAS PERSPECTIVE

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements
For the Degree

DOCTOR OF PHILOSOPHY

By

Llewellyn Swan Prater, B.S., M.S.
Denton, Texas
May 1998

This study investigated Texas nurses' attitudes toward mandatory continuing education, and their perceptions of skill improvement, knowledge enrichment and improvement of health care to the public as a result of participation in twenty contact hours of continuing education programs as required by the Board of Nurse Examiners for the State of Texas.

A self-administered questionnaire was mailed to a random sample of 500 registered nurses residing in Texas with a return rate of 25%. Seventy-two percent of the responding nurses had a positive attitude toward mandatory continuing education. Texas nurses also felt that health care to the public had been improved by participation in 20 hours of mandatory continuing education. Fifty-six of the responding nurses perceived improved performance of psychomotor skills, 83% felt cognitive skills were improved, and 72% felt affective skills were improved as a result of participation in mandatory continuing education.

Participation patterns of the responding nurses revealed independent providers or professional organizations were
chosen most frequently. The greatest benefit of mandatory continuing education was that participation increased nurses' general knowledge base, while interest in the topic and relevance of the course content to their practice area were the most important factors when choosing a continuing education program. The majority of the respondents indicated a preference for lecture/discussion over other forms of instruction, and an independent provider of continuing education courses was the provider of choice.

This sample of Texas nurses felt that the goals set forth by the Board of Nurse Examiners for the State of Texas had been met by participation in mandatory continuing education. However, given the small return rate, the attitudes of these nurses may not represent the attitudes of the majority of Texas nurses. Participation pattern findings have implications for providers of mandatory continuing education. Programs that include issues relevant to practice and topics of interest for working nurses should be considered. Competency as an outcome of participation in mandatory continuing education needs further study.
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ACKNOWLEDGMENTS

This project could not have been completed without the help and support of many people. First, I would like to thank Dr. Ron Newsom, my dissertation chairperson, for his guidance and wisdom throughout my doctoral program, and especially with this project. Second, I would like to thank Dr. Edward Foltz, my minor professor, for being a true student advocate and working with me in a long distance manner from Appalachian State University. I am also grateful to my other committee member, Dr. Bill Brookshire, for his continued feedback and support.

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CHAPTER I

INTRODUCTION

Mandatory professional continuing education for nurses has generated much debate among health-care professionals, educators, and legislators during the past decade. Proponents of mandatory continuing education argue that this is the only way to ensure participation by the majority of practitioners (Hutton, 1987). The issue of competency as an outcome of mandatory continuing education is an underlying assumption that some challenge and feel needs to be studied further (Brown, 1988; Carpenito, 1991; Matthew, 1987). Opponents of mandatory continuing education present both practical and philosophical arguments against the practice (Davee, 1994; Pew, 1995). Some argue that voluntary participation fosters the learner's intrinsic motivation, resulting in increased learning. In contrast, Houle (1980), believes mandatory continuing education does not necessarily ensure either utilization of knowledge or increased competence.

Whether for or against mandatory continuing education, Texas nurses must now comply with Senate Bill 622, which was passed in 1989 by the Texas Legislature and gave the Board of Nurse Examiners for the state of Texas the authority to make
continuing education a requirement for relicensure. The Board’s intent in mandating continuing education was to ensure that registered nurses participate in programs designed to promote and enrich knowledge, improve skills, and develop attitudes for the enhancement of nursing practice, thus improving health care to the public (Board of Nurse Examiners, 1991). This study queried Texas nurses for the first time since mandatory continuing education was instituted in 1991 and describes their perceptions of the programs, and attendant outcomes as formulated by the Board of Nurse Examiners for the State of Texas.

The Problem

Is there an association in the attitudes of Texas nurses who participated in 20 hours of mandatory continuing education and their perception of knowledge enrichment, skill improvement, and improvement of health care to the public?

Purposes of the Study

This research investigated Texas nurses’ attitudes toward mandatory continuing education, their perceptions of skill improvement, knowledge enrichment and improvement of health care to the public as a result of participation in twenty hours of continuing education programs. Participation patterns and demographic data of Texas nurses are also described.
Hypotheses

1. There is no relationship between attitude toward mandatory continuing education and perceived improvement of health care to the public.

2. There is no relationship between attitude toward mandatory continuing education and perceived improvement of affective nursing skills.

3. There is no relationship between attitude toward mandatory continuing education and perceived improvement of psychomotor nursing skills.

4. There is no relationship between attitude toward mandatory continuing education and perceived improvement of cognitive nursing skills.

5. There is no relationship between attitude toward mandatory continuing education and perceived knowledge enrichment.

Significance of the Study

When Senate Bill 622 was passed in 1989, the Board of Nurse Examiners for the State of Texas stated several reasons for instituting mandatory continuing education as a requirement for relicensure of the approximately 95,000 registered nurses in Texas. This study evaluated Texas nurses’ perceptions of whether the Board’s goals were met by participation in mandatory continuing education programs.

The Board of Nurse Examiners for the State of Texas requires that every two years registered nurses participate
in at least 20 contact hours of continuing education activities that are likely to cost around $300. Today, with 95,000 registered nurses in Texas, this amounts to substantial investments in both time and money.

This study also contributes to the theory and practice of adult education in that nurses' response to participation, content, and evaluation was explored as an instance of the larger phenomena, participation in mandatory professional continuing education. This study also provides opportunity for participant input and evaluation of a legislative mandate by nurses in Texas.

Definition of Terms

For the purpose of this study, the following terms were defined:

**Continuing Education:** "Programs, beyond the basic preparation, which are designed to promote and enrich knowledge, improve skills and develop attitudes for the enhancement of nursing practice, thus improving health care to the public." (Texas Nurses Association, 1994)

**Diploma Nursing Program:** This type of nursing program is usually conducted by and based in a hospital, generally requires 24-30 months of study and includes courses in theory and practice of nursing, and in biologic, physical, and behavioral sciences (Ellis and Hartley, 1995).
**Mandatory Continuing Education:** A situation in which the licensing board of a profession establishes rules and regulations requiring its members to attend a certain number of hours of approved educational activities as a condition of relicensure.

**Participation:** Participation amounting to at least 20 contact hours of approved continuing education within the two years immediately preceding renewal of a nurse's license.

**Perceive:** To be aware of objects primarily through one's senses; the influence of past experience is embodied as an often indistinguishable component (English, 1958).

**Nursing Skills:**

**Psychomotor Learning:** The purposeful development of new physical skills which involves combining mental awareness with sequencing neuromuscular responses.

**Cognitive Learning:** Learning that involves thinking and attaching meaning to feelings, ideas, and events. It includes the acquisition of knowledge, the understanding of information, the application of knowledge, the synthesis of information, and the evaluation of the outcome. (Bloom, 1956).

**Affective Learning:** Learning that involves internalizing new feelings or values which include becoming aware, being willing to receive, responding, valuing, organizing, and being characterized by values. (Redman, 1992).
**Knowledge Enrichment**: The attainment of new or current information relating to the practice of nursing.

**Attitude**: "...a person's evaluation of any psychological object" (Ajzen, 1980, p. 27); in this study the object is mandatory continuing education.

**Nursing Practice**: "The performance of services for compensation appropriate for RNs employed in clinical practice, administration, education, or research" (TNA, 1994).

**Limitations**

For the purpose of this study, the following limitations were applicable:

1. There is a risk of respondents providing “socially desirable” responses when using any scale to measure attitude.

2. Respondents were asked to recall the past two years of program participation and while there are both theoretical and methodological arguments supporting the “recall” approach, there were limitations to this method in that the subjects may not have accurately recalled and communicated past attitudes (Hutton, 1986).

**Delimitation**

For the purpose of this study, the following delimitation was applicable:
1. The sample for this study consisted of 500 randomly selected registered nurses in Texas.

Assumptions

The following basic assumptions applied to this study:

1. Attitudes are measurable phenomena.
2. There is a relationship between an individual's attitude and behavior, and experience affects both.

Summary

Mandatory continuing education for nurses was instituted by the Board of Nurse Examiners for the State of Texas in 1991. The Board set forth four goals as the rationale for this mandate. The goals were that Texas nurses would participate in programs that would enrich knowledge, improve skills, and develop attitudes for the enhancement of nursing practice, thus improving health care to the public (Board of Nurse Examiners, 1991). This study examined Texas nurses' attitudes toward mandatory continuing education and their perceptions of whether the Board's goals were met. Participation patterns, barriers to and benefits of mandatory continuing education were also identified.

Chapter II presents a review of selected literature related to mandatory continuing education and its relevance to nursing. Chapter III discusses the methodology used in this study. Chapter IV presents the content analysis of the data and a discussion of the findings of this study. A
discussion of the conclusions, implications, and recommendations for further study is presented in Chapter V.
CHAPTER II

REVIEW OF LITERATURE

This chapter reviews selected literature on continuing education, mandatory continuing education, mandatory continuing education in nursing and adult education principles. Historically, continuing education has been a hallmark in defining a profession. Many professions have mandated continuing education in an effort to keep their practitioners current and informed.

It has only been in recent years that nursing has instituted this practice nationwide, and only since 1991 has Texas instituted continuing education as a requirement for relicensure.

Continuing Education

Continuing education has a long history in some professions. In 1914, Florence Nightingale described the profession of nursing:

Nursing is a progressive art, in which to sit still is to go back. A woman who thinks to herself, 'Now I am a full nurse, a skilled nurse, I have learnt all there is to be learnt.' Take my word for it, she
does not know what a nurse is, and never will know. She has gone back already. Progress can never end with a nurse's life. (p.1)

It was not until the 1960s, when some professions became subject to widespread criticism, that continuing education became formalized. The new emphasis on formalized continuing education was focused on the assurance of quality performance. Houle (1980) proposed that this new focus arose from the changing relationship of the professional to the profession. As the number of practicing professionals has grown, the ability of each profession to police its members has diminished. Houle (1980) also proposed that as the number of practitioners increases, so does the probability that some will be ineffective or unethical.

Peter Jarvis (1983), who wrote extensively on learning in the professions states:

Every person who practices a profession needs to understand the evolving nature of its central mission, to be aware of relevant new developments in its basic disciplines, to improve competence, to use the theories and techniques of innovative practice, to apply the ethical principles required in a constantly changing work and social environment, to strengthen and sustain a responsibly coherent profession, to preserve an appropriate perspective on work life and not be
engulfed by it, to collaborate with members of other professions...and to represent the profession responsibly in all relationships with the persons he or she serves. (p. 307)

Mandatory Continuing Education in Nursing

The beginning of formalized mandatory continuing education in nursing began in 1968 at a national planning conference sponsored by the National University Extension Association, the American Association of College Registrars and Admissions Officers, the U. S. Civil Service Commission, the U. S. Office of Education and 34 other organizations (Casey, 1991). The aim of this conference was to investigate the idea of developing a uniform unit to identify, measure, and recognize individual efforts in continuing education. From this conference, a special national task force was formed to devise criteria and guidelines for awarding and utilizing the continuing education unit (CEU). The CEU was identified at that time as "10 contact hours of participation in an organized, continuing education experience under responsible sponsorship, capable direction and qualified instruction" (Casey, 1991, p.26). This concept received widespread approval and usage. Several professional organizations adopted the CEU as a means of documenting continuing education of its members, and the American Nurses Association was among the first. In 1974, the American Nurses Association began developing a system for approved
continuing education to be a pre-requisite for relicensure. These guidelines were published in 1975 and mandatory continuing education began to be recorded in contact hours (one contact hour was equated with fifty minutes and ten contact hours equaled one CEU).

It was the intent that state nurses' associations would be responsible for the approval of continuing education offerings in states with both voluntary and mandatory continuing education for nurses and that the states would follow the American Nurses Association's guidelines and standardize the process of recording and reporting continuing education.

Each state Board of Nursing retains individual authority to regulate practice within its state. This autonomy provides individual interpretation and implementation of the continuing education process.

Mandatory Continuing Education for Nurses in Texas

In 1989, Senate Bill 622 was passed by the Texas Legislature. This bill gave the Board of Nurse Examiners for the State of Texas the authority to require continuing education for license renewal of the registered nurses in Texas. The requirement, as it is stated today, is 20 contact hours (2 CEUs) of approved continuing education programs every 2 years.

The issue of mandating continuing education for professionals has not been without controversy. In nursing,
proponents for and against mandatory continuing education have stated their cases.

Advocates for mandatory continuing education state reasons such as improved nursing practice through increased competency, increased productivity in professional roles, the development of new skills and knowledge and keeping abreast of new developments in nursing (DeSilets, 1995). Meservey and Monson (1987) found that continuing education offerings "facilitated improved techniques, more confidence, greater knowledge and skills in nursing personnel and more comfort in handling patient problems" (p. 217). Waddell (1992) studied the extent to which continuing nursing education has had a positive effect on nursing practice. She found, through a meta-analysis of 34 published and unpublished research studies, that continuing nursing education did positively affect nursing practice but did not yield much information on why.

Those against mandating continuing nursing education typically cite philosophical reasons—such as attendance does not equal learning or competency and currency in nursing (or any other profession) (Cooper, 1973, 1978, Rockhill, 1983). Phillips (1990) stated that mandatory continuing education specifically targets laggards "...those 25-35% of licensees who do little more than the minimum to remain in practice, whose ideas are fixed, whose old skills have deteriorated and who adopt few new ones" (p. 1). Carpenito (1991) believes
mandatory continuing education violates the voluntary nature of adult education and believes mandatory continuing education cannot guarantee a positive change in performance.

Several studies have been completed in the past 10 years that examine nurses' attitudes toward mandatory continuing education. Hungler (1985) surveyed nurses in six New England states and, in a comparison of nurses in one state where continuing education was mandated (Massachusetts), found that these nurses were more favorable in their attitudes toward mandatory continuing education than those in the other five New England states where continuing education was voluntary.

Arneson (1985) surveyed 673 nurses in Iowa and found that more than 73% held either favorable or strongly favorable attitudes toward mandatory continuing education. These nurses tended to be employed full-time in administrative, educational, or consultative positions, with educational preparation beyond the diploma or associate degree level.

Hutton (1986) studied Florida nurses' attitudes toward mandatory continuing education in an ex-post facto design which compared nurses attitudes before mandatory continuing education was implemented and six years after implementation. She found 78 percent of the nurses retained their positive attitude or displayed a positive attitude shift in favor of mandatory continuing education. Other outcomes of Hutton's
study showed nurses perceived more benefits than problems with mandatory continuing education, identified an increase in both the quality and availability of continuing education programs, indicated that mandatory continuing education affected their performance in practice, and agreed that mandatory continuing education should be retained.

The issue of mandatory continuing education for nurses continues to be debated. From the 1970s when mandatory continuing education was first introduced to nursing and Boards of Nurse Examiners from different states began requiring continuing education for relicensure, until 1998, when 18 states require continuing education for nurses, the philosophical issues have not changed. Hewlitt and Eichelberger (1996) concluded: "...there are two main issues identified as problems in the implementation of mandated continuing education. They are lack of funding and no established link between continuing education and patient care outcomes" (p. 181). The issue of relating continuing education to competence was also addressed by the Pew Report (1995) "CE requirements do not guarantee continuing competence" (p. 1). Additional research is needed to determine if there is a link between competence and continuing education and how nursing can determine the best methods of assuring consumers of continued competency on the part of health care practitioners.
Whether for or against mandatory continuing education, Texas nurses must now comply with the Board of Nurse Examiners for the State of Texas' mandate of 20 contact hours of approved continuing education every two years to maintain licensure. This study describes a small sample of Texas nurses' perceptions of that legislative mandate.
CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This descriptive study utilized a survey approach to determine Texas nurses' attitudes toward mandatory continuing education. A self-administered questionnaire was used as the data collection instrument.

Population and Sample

The population studied was registered nurses in Texas who had completed at least one 2-year relicensing cycle and 20 hours of mandatory continuing education courses. Since mandatory continuing education legislation was implemented in 1991, nurses were drawn from a sample who had held Texas licensure since 1993. The sample of 500 was drawn using a stratified, random method, from the list of registered nurses in Texas, in September, 1997. The sample also included only those nurses registered in Texas who also resided in Texas. The sampling technique was accomplished by a computer program written specifically for this project by an analyst at the Board of Nurse Examiners for the State of Texas. Two sets of mailing labels were generated from this program for use in sending out the questionnaires.
Protection of Human Subjects

Since a University Research Grant from Baylor University was awarded for this project the Baylor University Committee for the Protection of Human Subjects in Research reviewed and approved this research study (Appendix A). This project was also reviewed by the Institutional Review Board of the University of North Texas and was approved (Appendix A). A cover letter was attached to the questionnaire advising the participants of the minimal risk involved and their rights as a participant in the study (Appendix B). Subjects received the questionnaires by mail, and return of the questionnaires signified their consent to participate. Confidentiality was achieved by having no subject’s name appear on the questionnaire. Each subject received a stamped, preaddressed return envelope, and a postcard which could be mailed separately if they wished to receive a copy of the study results.

Instrument

The instrument used in this study was adapted from a previous study by Hutton (1986) with questions added that were designed to collect data relevant to the research objectives. The forty-six item questionnaire was used to elicit data on demographic, educational, and professional variables. The first twenty questions of the instrument used a Likert-type scale designed to measure the respondent’s attitude toward mandatory continuing education. The attitude
items were set up on a ten-point scale, with 1 indicating strong disagreement, and 10, strong agreement with the item. These items included attitude aspects, such as personal/professional/institutional benefits, effectiveness, efficiency, utility, and fairness which are related to mandatory continuing education (Hutton, 1986). Reliability and validity had already been established on the attitude toward mandatory education scale by Hutton (1986). The attitude scale consisted of 20 statements; eleven were positive statements about mandatory continuing education, and nine were negative statements about mandatory continuing education (Appendix D). The 20 items were randomly organized between negative and positive statements to reduce the risk of response bias. The negative statements were subsequently recoded so the summated scale would consist of unidirectional responses. In the final analysis, the higher the item score and total score, the more positive the respondent’s attitude toward mandatory continuing education. Conversely, the lower the item score and total score, the more negative the respondent’s attitude toward mandatory continuing education.

Items 21-24 were new questions designed to elicit data directly related to the hypotheses. These 4 items were derived from the Board of Nurse Examiners for the State of Texas' goals for mandatory continuing education.

Items 25-49 were designed to elicit demographic, educational, and professional information about the
respondents. Processes for selecting programs and providers and preferences regarding instructional design and provider types were also elicited.

Cronbach's alpha was performed on the sample to test the reliability of the new instrument which was found to be .92. A pilot study of 30 nurses from a community hospital in a large metropolitan area was conducted.

Data Collection

A cover letter and a self-administered questionnaire (Appendix C) were sent to 500 randomly selected registered nurses in Texas. A return envelope and a postcard were enclosed with each questionnaire. The participants were instructed to complete the questionnaire and return it within 2 weeks in the envelope provided. Instructions directed the participant to return the postcard separately if they desired to have the results of the study sent upon completion of the study. After four weeks, reminder postcards were mailed to those nurses who had not responded (n=384).

Treatment of the Data

All returned questionnaires were reviewed for completeness prior to data entry and analysis. Data were analyzed utilizing a variety of statistical methods. The Pearson r correlation was used to analyze the five hypotheses. Additional findings were analyzed using regression statistics. Descriptive statistics and responses
to open-ended questions were also analyzed for content and themes.
CHAPTER IV
ANALYSIS OF DATA

This chapter presents the analysis of data collected from the self-administered questionnaires. Data were obtained through a mail survey of registered nurses residing in Texas who were actively licensed in the state through the last biennium of mandatory continuing education. A respondent was eligible for inclusion in the study if she or he held active licensure in Texas beginning on or before January, 1994, and was a resident of Texas in 1997. A computer program was written by an analyst at the Board of Nurse Examiners for the State of Texas specifically for this project. From this list of eligible nurses in Texas, a random sample was generated and a total of 500 questionnaires were mailed. One hundred and twenty three usable questionnaires were returned which constitutes a 25% return rate.

Description of Sample

One hundred and twenty three questionnaires were returned from the original 500 sent. Participants included 116 females and 7 males, ranging in age from 32-72, with a mean age of 48. Table 1 contains descriptive demographic information regarding the study sample.
Table 1.

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<tr>
<td>Male</td>
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<td>Age</td>
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<td>31-40</td>
<td>24</td>
<td>19.3</td>
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<td>41-50</td>
<td>50</td>
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<td>51-60</td>
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<td>60+</td>
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<td>Marital Status</td>
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<td>Married</td>
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<tr>
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<td>Divorced</td>
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<td>Widowed</td>
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**Educational Characteristics**

Table 2 presents the educational characteristics of the sample.
Table 2.

**Educational Characteristics of the Sample**

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<td>Diploma</td>
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<td>Associate degree</td>
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<tr>
<td>Bachelor degree</td>
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<td><strong>Highest Degree Held</strong></td>
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<tr>
<td>Associate Degree in Nursing</td>
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<tr>
<td>Baccalaureate Degree in Nursing</td>
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<tr>
<td>Baccalaureate Degree in another field</td>
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<td>Doctorate Degree in another Field</td>
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</tbody>
</table>

Thirty-seven percent of the respondents held a bachelor's degree as their basic nursing preparation. The associate's degree was the entry level for 31.7%, while 28.5% entered at the diploma level. Examination of degrees held beyond the baccalaureate level revealed that 16.2% of respondents held masters or doctorate degrees. Seventeen
percent of the respondents were enrolled in school at the
time of this study.

**Employment characteristics**

Table 3 depicts employment patterns of the sample.

Table 3.

**Employment Characteristics of the Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time nursing</td>
<td>86</td>
<td>69.9</td>
</tr>
<tr>
<td>Part-time nursing</td>
<td>17</td>
<td>13.8</td>
</tr>
<tr>
<td>Full-time, non-nursing</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Not employed</td>
<td>12</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Current Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff nurse</td>
<td>44</td>
<td>35.8</td>
</tr>
<tr>
<td>Head nurse</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Supervisor</td>
<td>12</td>
<td>9.8</td>
</tr>
<tr>
<td>Advanced nurse practitioner</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>Faculty in School of Nursing</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>Administrator</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>22.0</td>
</tr>
<tr>
<td>Not currently employed</td>
<td>12</td>
<td>9.8</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 3. (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Place of Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td>53</td>
<td>43.1</td>
</tr>
<tr>
<td>Home Care Agency</td>
<td>9</td>
<td>7.3</td>
</tr>
<tr>
<td>Long Term Care Facility</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Other</td>
<td>40</td>
<td>32.5</td>
</tr>
<tr>
<td><strong>Clinical Specialty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>Critical care</td>
<td>13</td>
<td>10.6</td>
</tr>
<tr>
<td>Medical/Surgical</td>
<td>7</td>
<td>5.7</td>
</tr>
<tr>
<td>Geriatric</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>11</td>
<td>8.9</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Length of Time in Present Position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than one year</td>
<td>10</td>
<td>8.1</td>
</tr>
<tr>
<td>1-3 years</td>
<td>34</td>
<td>27.6</td>
</tr>
<tr>
<td>4-6 years</td>
<td>21</td>
<td>17.1</td>
</tr>
<tr>
<td>7-10 years</td>
<td>21</td>
<td>17.1</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>28</td>
<td>22.8</td>
</tr>
</tbody>
</table>

Regarding employment status, 69.9% of the nurses responded that they were employed full-time in nursing, while 13.8% said they were employed part-time in nursing. Current job positions were listed as 36% staff nurse, 9.8%
supervisor, with other categories listed in Table 3. The most frequent place of employment listed was hospital at 43%, with other listed as 32.5%. The two most common clinical specialties listed by the respondents were critical care (10.6%), and psychiatric (8.9%). The length of time in present position of 1-3 years was ranked the most frequently by the respondents. The number of years worked in nursing since obtaining the basic degree ranged from 1 to 50, with the mean being 20.44 years.

Findings of the Study

The first purpose of this study was to determine the nurse’s attitude toward mandatory continuing education. A 20-item scale was utilized to measure attitude toward mandatory continuing education. Eleven of the statements were positive in nature and nine were negative. Respondents were instructed to indicate their agreement or disagreement with the statement by circling their response on a 10-point Likert scale. The nine negative statements were recoded as positive statements and the responses were added to determine the attitude score. A frequency distribution of the subjects’ responses was calculated for each statement. The frequency distribution of the attitude scale items is shown in Appendix E. The overall attitude scores ranged from 53-200, with the mean being 145.77 and the standard deviation 34.17.
Item 21 of the survey asked respondents to rate their perception of performance improvement of psychomotor nursing skills as a result of participation in mandatory continuing education. Nursing skill improvement was one of the Board of Nurse Examiners for the State of Texas' goals for mandating continuing education for nurses. This item gave nurses an opportunity to rate whether participation in continuing education improved their psychomotor nursing skills. This item was scored using a Likert-type scale with 1 (strongly disagree) to 10 (strongly agree). The nurses responded in a neutral manner, with the mean at 5.64, and the standard deviation at 3.11. Negative comments listed were: "not enough hands on," "very little with skills," "education doesn't improve skills," "more cognitive than skills," "not taken course for skills," and "more lecture than skills." Positive comments were: "solidly cement skills," "provides confidence," "new equipment and procedures," "new ideas through skills," "skills such as IV's, advanced cardiac life support, new techniques," and "helps hone skills."

Item 22 measured the relationship between participation in mandatory continuing education and the perceived improvement of cognitive nursing skills. Again, this item was derived from the Board of Nurse Examiners for the State of Texas' goals for instituting mandatory continuing education for nurses. A Likert-type scale was utilized with 1 (strongly disagree) to 10 (strongly agree). Nurses'
responses to this item were toward the affirmative, with the mean at 7.91 and a standard deviation of 2.49. Comments for this item were positive: "students benefit," "expands memory," "new information," "gives new ideas and theories," "helps keep us current," "supports basic foundations of nursing." Cognitive skills listed by participants included: time management, new therapies, assessment skills, rationale for treatment and care for lung transplant patients, creative cardiac rehabilitation, designing treatment plans, AIDS information, and chemical dependency treatments.

Item 23 on the questionnaire addressed the relationship of mandatory continuing education and improved performance of affective nursing skills. A Likert-type scale was utilized with 1 (strongly disagree) to 10 (strongly agree). This item was also derived from the Board of Nurse Examiners for the State of Texas’ goals for instituting mandatory continuing education. Participants rated this statement toward the positive, with the mean at 6.64 and a standard deviation of 2.83. Comments generated from this item which revealed participants felt positive about affective nursing skills were: "increases awareness," "provides stimulus for growth," "reconfirms knowledge," "exposes us to different views," "teaches critical thinking and reasoning," and "provides greater levels of care." Examples of affective nursing skills cited by participants included organ donation, personal therapy, cultural classes, legal issues, ethics and
values, standards of practice, and holistic therapeutic touch.

The respondents' attitude score was correlated with their rankings of items 21, 22, 23, and 24 to answer the questions raised by the hypotheses.

Hypothesis #1

There is no relationship between attitude toward mandatory continuing education and perceived improvement of health care to the public.

The results of item 24 were correlated with the respondents' attitude score using the Pearson $r$, where $r = .52$ and $p = <.001$. This is a significant relationship; therefore, Hypothesis 1 is rejected and the alternative is supported.

Hypothesis #2

There is no relationship between attitude toward mandatory continuing education and perceived improvement of affective nursing skills.

A significant relationship was found between the nurses' attitude toward mandatory continuing education and their perceived improvement of affective nursing skills as a result of participation in mandatory continuing education. This relationship is demonstrated by a Pearson $r$ of .57 with $p = <.001$. This is a significant relationship; therefore, Hypothesis 2 is rejected, and the alternative is supported.
Hypothesis #3

There is no relationship between attitude toward mandatory continuing education and perceived improvement of psychomotor skills.

A relationship was found between the nurses' attitude toward mandatory continuing education and their perceived improvement of psychomotor nursing skills as a result of participation in mandatory continuing education. This relationship is demonstrated by a Pearson $r$ of .65 with $p<.001$. This is a significant relationship; therefore, Hypothesis 3 is rejected and the alternative is supported.

Hypothesis #4

There is no relationship between attitude toward mandatory continuing education and perceived improvement of cognitive nursing skills.

A significant relationship was found between the nurses' attitude toward mandatory continuing education and their perceived improvement of cognitive nursing skills as a result of participation in mandatory continuing education. This relationship is demonstrated by a Pearson $r$ of .52 with $p<.001$. This is a significant relationship; therefore, Hypothesis 4 is rejected and the alternative is supported.
Hypothesis #5

There is no relationship between attitude toward mandatory continuing education and perceived knowledge enrichment.

A significant relationship was found between the participant's attitude score and their perceived improvement of general knowledge as a result of participation in continuing education, as demonstrated by a Pearson $r = .38$ and $p < .001$. Therefore, Hypothesis 5 is rejected and the alternative hypothesis is supported.

Additional Findings

Participation patterns of Texas nurses in obtaining the 20 contact hour requirement of mandatory continuing education was also a focus of this study. Item 25 from the questionnaire asked respondents to report the number of hours spent in continuing education beyond the 20 hours required for relicensure. Participants responded in a range from 0 hours to 135 hours, with a mean of 27.3.

Item 26 from the questionnaire directed respondents to report the number of hours taken from specified providers in collecting their 20 contact hours of mandatory continuing education. Table 4 reports the data for this finding.
Table 4
Continuing Education Hours by Provider

<table>
<thead>
<tr>
<th>Provider</th>
<th>Total Hours</th>
<th>Number of Participants</th>
<th>Average Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Association</td>
<td>846</td>
<td>49</td>
<td>17.2</td>
</tr>
<tr>
<td>Community College</td>
<td>86</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>University</td>
<td>449</td>
<td>20</td>
<td>22.4</td>
</tr>
<tr>
<td>Hospital other than</td>
<td>313</td>
<td>31</td>
<td>10.0</td>
</tr>
<tr>
<td>Employer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer</td>
<td>709</td>
<td>61</td>
<td>11.6</td>
</tr>
<tr>
<td>Home Study</td>
<td>920</td>
<td>55</td>
<td>16.7</td>
</tr>
<tr>
<td>Independent Provider</td>
<td>1051</td>
<td>70</td>
<td>15.0</td>
</tr>
<tr>
<td>Other</td>
<td>161</td>
<td>8</td>
<td>20.1</td>
</tr>
</tbody>
</table>

The most frequent provider of courses chosen by Texas nurses for meeting their 20 hour continuing education requirement was an independent provider, with a total of 1051 hours taken by 70 nurses. Independent providers are typically commercial courses or consultants who provide educational courses for a fee. The second most frequent type of provider was home study, with a total of 920 hours taken by 55 nurses. Home study offerings are typically self-taught by way of independent study with learning modules in professional journals. "Other" providers would be any provider of continuing education courses that do not fall into the designated categories.
Item 27 from the questionnaire utilized a forced-choice format and directed the respondents to indicate the time period during which they acquired the 20 contact hours for relicensure. Seventy-three percent of the respondents described the time period for acquisition of the 20 mandatory continuing education hours as "throughout the cycle, during the entire period from one renewal date to another."

The type of instruction as it related to the participant's learning needs and style was elicited in item 28 of the questionnaire. Table 5 gives the mean and standard deviation for each type of instruction as rated by the respondents.

Table 5.

<table>
<thead>
<tr>
<th>Type of Instruction</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture/Discussion</td>
<td>3.90</td>
<td>1.02</td>
</tr>
<tr>
<td>Courses with a clinical component</td>
<td>3.59</td>
<td>1.34</td>
</tr>
<tr>
<td>Small group seminar format</td>
<td>3.52</td>
<td>1.14</td>
</tr>
<tr>
<td>Independent study</td>
<td>3.21</td>
<td>1.39</td>
</tr>
</tbody>
</table>

When respondents were questioned about instructional strategies related to learning needs and style, lecture/discussion was chosen the most often, with independent study chosen the least often.

The issue of quality as it related to continuing education providers was also analyzed from this study. Item
29 of the questionnaire directed the participants to rate the quality of the providers they had encountered while participating in mandatory continuing education. The items were scored using a 5 point Likert type scale with 1 (lowest quality) to 5 (highest quality). Table 6 provides information on respondents' ranking of providers in relation to quality.

Table 6.

<table>
<thead>
<tr>
<th>Provider</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Association</td>
<td>4.04</td>
<td>.91</td>
</tr>
<tr>
<td>Independent Continuing Education</td>
<td>3.86</td>
<td>.93</td>
</tr>
<tr>
<td>Hospital other than Employer</td>
<td>3.75</td>
<td>.98</td>
</tr>
<tr>
<td>University</td>
<td>3.76</td>
<td>1.10</td>
</tr>
<tr>
<td>Your Employer</td>
<td>3.59</td>
<td>1.10</td>
</tr>
<tr>
<td>Home Study</td>
<td>3.33</td>
<td>1.21</td>
</tr>
<tr>
<td>Community College</td>
<td>3.06</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Survey respondents ranked educational offerings by a professional association as having the highest quality programs and community college courses as having the lowest quality programs.

Personal and professional benefits as a result of participation in mandatory continuing education programs were analyzed as a component of participation patterns of Texas nurses. Item 30 of the questionnaire directed respondents to
rate the benefits to them as a practicing nurse. Eight possible benefits were listed, each utilizing a Likert scale for rating, where 1 is least beneficial and 5 is most beneficial. Table 7 reports the findings for this variable.

Table 7.

Benefits as a Result of Participation in Mandatory Continuing Education

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased General Knowledge Base</td>
<td>4.02</td>
<td>.99</td>
</tr>
<tr>
<td>Increased Awareness of Professional Issues</td>
<td>3.86</td>
<td>.94</td>
</tr>
<tr>
<td>Improved Performance in Practice</td>
<td>3.72</td>
<td>1.08</td>
</tr>
<tr>
<td>Provided Opportunity to Network with Colleagues</td>
<td>3.59</td>
<td>1.21</td>
</tr>
<tr>
<td>Motivation to Continue Learning Beyond Required Hours</td>
<td>3.45</td>
<td>1.26</td>
</tr>
<tr>
<td>Expanded Professional Network</td>
<td>3.31</td>
<td>1.28</td>
</tr>
<tr>
<td>Contributed to Career Advancement</td>
<td>2.85</td>
<td>1.42</td>
</tr>
<tr>
<td>Motivation to Return to School</td>
<td>2.33</td>
<td>1.36</td>
</tr>
</tbody>
</table>

Table 7 ranks the outcomes of benefits with increased general knowledge base as the most beneficial outcome of mandatory continuing education and motivation to return to school as the least beneficial outcome of mandatory continuing education.
Problems encountered by the respondents based on their experience with mandatory continuing education were analyzed as barriers to participation. Possible barriers were listed and participants were asked to rank them on a 1 to 5 Likert scale with 1 indicating a large problem and 5 indicating a small problem. Table 8 reports the problems to mandatory continuing education as ranked by Texas nurses.

Table 8.
Problems Encountered by Texas Nurses Based on Experience with Mandatory Continuing Education

<table>
<thead>
<tr>
<th>Problem</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Quality Programs</td>
<td>3.51</td>
<td>1.26</td>
</tr>
<tr>
<td>Lack of Accessible Programs</td>
<td>3.29</td>
<td>1.42</td>
</tr>
<tr>
<td>Too Time Consuming</td>
<td>3.44</td>
<td>1.35</td>
</tr>
<tr>
<td>Lack of Employer Support</td>
<td>3.12</td>
<td>1.57</td>
</tr>
<tr>
<td>Lack of Relevant Programs</td>
<td>3.14</td>
<td>1.43</td>
</tr>
<tr>
<td>Too Costly</td>
<td>2.35</td>
<td>1.42</td>
</tr>
</tbody>
</table>

Table 8 ranks the problems given by Texas nurses from least problematic to most problematic in participation in mandatory continuing education. Cost was rated the most problematic, with lack of quality programs rated as the least problematic.

Item 32 of the questionnaire directed respondents to rank from least important to most important the factors that determined their choice of a continuing education program.
Eight factors were listed with ranking by a Likert scale from one to five, with one the least important factor in determining choice of a continuing education program and five the most important factor in determining choice of a continuing education program. Table 9 lists the factors as ranked by Texas nurses from most important to least important.

Table 9.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest in Topic</td>
<td>4.65</td>
<td>.56</td>
</tr>
<tr>
<td>Relevance of Course Content to Practice Area</td>
<td>4.59</td>
<td>.78</td>
</tr>
<tr>
<td>Convenient Day and Time</td>
<td>4.40</td>
<td>.78</td>
</tr>
<tr>
<td>Convenient Location</td>
<td>4.28</td>
<td>.82</td>
</tr>
<tr>
<td>Cost of the Program</td>
<td>3.98</td>
<td>1.12</td>
</tr>
<tr>
<td>Reputation of the Provider</td>
<td>3.84</td>
<td>.98</td>
</tr>
<tr>
<td>Reputation of the Faculty</td>
<td>3.73</td>
<td>1.07</td>
</tr>
<tr>
<td>Type of Instructional Format</td>
<td>3.59</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Interest in the topic and relevance of the course content to practice area were the most frequently cited factors that determined the respondents' choice of a continuing education program.

Other significant findings from the data were found utilizing the Pearson r. The Attitude Toward Mandatory
Continuing Education score was found to be significant for correlations with eight participation pattern variables. Table 10 presents data for these findings.

Table 10.

Correlation Coefficients of Significant Participation Pattern Findings

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributed to Career Advancement</td>
<td>.55</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Motivation for Continued Learning beyond the hours required</td>
<td>.56</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Lecture/Discussion as Type of Instruction</td>
<td>.34</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Increased Awareness of Professional Issues</td>
<td>.38</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Improved Performance in Practice</td>
<td>.52</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Motivation to Return to School</td>
<td>.34</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Lack of relevant programs</td>
<td>.36</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Problem of too time consuming</td>
<td>.44</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

The data revealed 8 significant relationships between attitude toward mandatory continuing education and participation patterns. The first relationship is with five benefit variables: career advancement, continued learning, increased performance, increased awareness of professional issues, and increased motivation to return to school. These five benefits indicated a positive relationship with attitude
toward mandatory continuing education; the more positive the 
respondents' attitude score, the more benefit the respondent 
perceived the variable to be. The second relationship found 
was between attitude toward mandatory continuing education 
and lecture-discussion as the most popular type of 
instructional format. This relationship was also positive; 
the more positive the attitude score, the more frequent 
lecture/discussion was favored. A third relationship was 
found between attitude toward mandatory continuing education 
and two problems; program attendance too time consuming and 
lack of relevant programs. This significant correlation 
found the more positive the attitude score for mandatory 
continuing education, the less the participants felt there 
was a problem with programs being too time consuming or a 
lack of relevant programs to attend.

A stepwise multiple regression procedure was conducted 
to examine the predictive ability of several variables on the 
attitude score. Table 11 presents the variables which were 
significant in predicting the score.
Table 11.

Stepwise Multiple Regression of Attitude

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>T</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased</td>
<td>10.919649</td>
<td>3.178927</td>
<td>.463510</td>
<td>3.435</td>
<td>.0022</td>
</tr>
<tr>
<td>Career Advancement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased</td>
<td>12.300472</td>
<td>5.20516</td>
<td>.319671</td>
<td>2.363</td>
<td>.0266</td>
</tr>
<tr>
<td>General Knowledge Base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of relevant programs</td>
<td>6.178934</td>
<td>2.678621</td>
<td>.284315</td>
<td>2.307</td>
<td>.0300</td>
</tr>
<tr>
<td>Years post basic degree</td>
<td>1.851233</td>
<td>.616157</td>
<td>.372206</td>
<td>3.004</td>
<td>.0061</td>
</tr>
<tr>
<td>Constant</td>
<td>14.015105</td>
<td>24.339987</td>
<td>.576</td>
<td>.5701</td>
<td></td>
</tr>
</tbody>
</table>

Four variables were significant predictors of the respondent's attitude toward mandatory education. They were: a) benefit in contributing to career advancement, b) benefit in increasing general knowledge base, c) problem in lack of relevant programs, and d) years in nursing practice since obtaining basic nursing degree. In addition, these four variables explained 64% of the variance in the attitude scores (R^2 = .64844).
CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This chapter presents a summary of the study as discussed in previous chapters. In addition, the findings are discussed, and conclusions and implications of the current study are examined. Recommendations for further study are also given.

Summary of Study Design and Method

This study investigated Texas nurses' attitudes toward mandatory continuing education, and their perceptions of skill improvement, knowledge enrichment and improvement of health care to the public as a result of participation in twenty contact hours of continuing education programs.

A self-administered questionnaire was mailed to a random sample of 500 registered nurses residing in Texas. One section of the questionnaire consisted of a 20-item Likert scale designed to measure attitude toward mandatory continuing education. Another section of the questionnaire consisted of forced-choice and open-ended questions designed to elicit data on personal, professional, educational and institutional factors associated with the respondent's perception of mandatory continuing education. Demographic
data were also collected as a part of the questionnaire. The Statistical Package for the Social Sciences was used for data analysis; alpha was preset at .05 for all statistical tests. The Pearson $r$ was utilized to test the 5 hypotheses. Regression, correlation coefficients, and frequency distributions were used to analyze the participation patterns of the respondents.

Discussion of Findings

The return rate for the 500 questionnaires was 25% (123 usable questionnaires). Some sources cite a 20 to 30 percent return rate for mailed questionnaires to be the norm (Diers, 1979; Williamson, 1991), while others report a more common response rate closer to 50 percent (Polit and Hungler, 1983; Shelley, 1984). The lower than expected return rate for this study may be due to several factors. One factor could be that those nurses most interested in mandatory continuing education chose to complete the questionnaire. Another factor may be that the mailing period, which occurred around the holidays, was inconvenient for the nurses involved.

There were no significant findings related to the demographic data in this study. The majority of the respondents were female, which mirrors the population of nurses in Texas. Data from the study indicated the bachelor degree to be the most frequently obtained degree for entry level into practice. Of interest is that 80% of the
practicing nurses in Texas hold the associate degree. This discrepancy may indicate a skewed sample, or the baccalaureate degree nurse was more likely to return the questionnaire.

Employment characteristics of the sample indicated the majority of nurses worked full-time as staff nurses in hospital settings. The length of time in the present position was fairly evenly divided between 1-3 years, 4-6 years, 7-10 years, and more than 10 years. As the nursing profession offers a variety of employment opportunities to nurses, this trend of job transition every three years is consistent with what is seen in practice.

Twenty hours of continuing education was mandated by the Board of Nurse Examiners for the State of Texas in 1991 as a requisite for relicensure of registered nurses. The goal of this mandate was to ensure that Texas nurses participated in programs designed to enrich knowledge, improve skills, and develop attitudes for the enhancement of nursing practice, thus improving health care to the public (Board of Nurse Examiners, 1991).

The first purpose of this study was to determine Texas nurses' attitudes toward mandatory continuing education. The results of 123 responses to a set of 20 statements representing attitudes toward mandatory continuing education were analyzed using a frequency distribution. The majority of the respondents (72%), held a positive attitude toward
mandatory continuing education. This is consistent with other studies that measured attitudes toward mandatory continuing education. Arneson (1980) found 73% of Iowa nurses to be favorable toward mandatory continuing education, and Hutton (1986) found 78% of Florida nurses favorable toward mandatory continuing education.

The second purpose of the study was to determine if there was a relationship between attitude toward mandatory continuing education and perceived improvement of health care to the public. A significant relationship was found using the Pearson $r$ correlation. Respondents who held a positive attitude toward mandatory continuing education perceived that health care to the public was improved as a result of participation in 20 contact hours of mandatory continuing education. Improving health care to the public was one of the Board of Nurse Examiners for the State of Texas' goals when mandatory continuing education was instituted in 1991. This study reveals that most respondents perceive this goal to have been met.

The third purpose of the study was to determine if there was a relationship between attitude toward mandatory continuing education and perceived improvement of affective nursing skills, cognitive nursing skills and psychomotor nursing skills as a result of 20 hours of mandatory continuing education. Perception of performance improvement
of psychomotor, cognitive, and affective nursing skills as a result of participation in mandatory continuing education by Texas nurses revealed several findings.

A slight majority (57%) of Texas nurses perceived improved performance of psychomotor nursing skills as a result of participation in mandatory continuing education. Comments by the participants written about this question indicated there were not many continuing education opportunities with a psychomotor component. This may be due to psychomotor skills requiring hands on experience, which is hard to program for in terms of equipment, space and time. A significant relationship was found between the respondents' attitude toward mandatory continuing education and their perception of improvement of psychomotor skills. This was a positive relationship; the more favorable the nurses' attitude toward mandatory continuing education, the more she perceived an improvement of psychomotor nursing skills.

The improvement of cognitive skills as a result of participation in mandatory continuing education was found to be true by the majority (83%) of Texas nurses. Cognitive skills related to the understanding of information and the application of knowledge. This corresponds to the participants' most desired type of instruction being lecture/discussion. A positive relationship was also found between Texas nurses' attitude toward mandatory continuing education and their perceived improvement of cognitive
nursing skills as a result of participation in mandatory continuing education.

The improvement of affective nursing skills as a result of mandatory continuing education was found, with 72% of the respondents in agreement with the item. A positive relationship was also found between attitude toward mandatory continuing education and perceived improvement of affective nursing skills as a result of participation in mandatory continuing education.

Regarding participation patterns in mandatory continuing education programs, one hundred and eleven of the one hundred and twenty-three respondents indicated that they accumulated more than the 20 required hours of continuing education in the last biennium of their re-certification cycle. This finding targets the issue of mandatory versus voluntary continuing education. Most of the respondents from this study participated in well over the required number of hours, which provides evidence that these respondents value participation in continuing education, whether mandatory or not. This is consistent with previous studies, which show nurses participating in continuing education, even when it is not mandated (DeSilets, 1995; Thurston, 1992). Seventy-five percent of the respondents described the time period for acquisition of the 20 mandatory continuing education hours as “throughout the cycle, during the entire period from one renewal date to another.”
Respondents of this study chose courses offered by an independent provider or home study most frequently. Since mandatory continuing education was instituted in Texas in 1991, educational companies and consultants have developed a variety of courses to meet the needs of Texas nurses. Generally, there is a fee for these commercial courses, but courses offered through nursing journals or via the Internet are generally without cost. Because this sample of nurses most frequently utilized an independent provider for their courses, cost concern as the biggest barrier to mandatory continuing education is not surprising. Respondents rated courses by their professional organization and by independent continuing education providers as having the highest quality programs, which may be another reason they were chosen most frequently.

The type of instruction most suited to the respondents' learning needs and style was lecture/discussion, while independent study was found to be the least suited to the respondents' learning needs and style. Even though independent study may not be the best suited to learning style, respondents may choose it because of convenience, low cost, and the ability to complete at home.

Personal and professional benefits as a result of participation in mandatory continuing education programs were analyzed. The most frequently chosen benefits as a result of mandatory continuing education were an increased general
knowledge base, an increased awareness of professional issues, and improved performance in practice. These benefits to nurses are directly related to everyday practice, which may have an impact on providers when developing programs for practicing nurses. These benefits are congruent with previous studies by (Hutton, 1986; Cox, 1984; and Puetz, 1980).

Interest in the topic and relevance of the course content to practice areas were the most frequently chosen factors that determined Texas nurses' choice of a continuing education program. This finding suggests that nurses choose courses for personal and professional relevance and has implications for continuing education providers.

Other significant findings from the study were revealed when utilizing the Pearson $r$ for correlating attitude toward mandatory continuing education with participation pattern variables. Five benefits as a result of participation in mandatory continuing education were found to have a positive relationship with attitude toward mandatory continuing education. The benefits were (a) improved performance in practice, (b) contributed to career advancement, (c) increased awareness of professional issues, (d) motivation to continue learning beyond hours required, and (e) motivation to return to school. The correlation between attitude toward mandatory continuing education and lecture/discussion as the
most popular type of instructional format for mandatory continuing educational programs was also significant in a positive direction. A significant correlation was found with two problems encountered with participation in mandatory continuing education; the higher the score for attitude toward mandatory continuing education, the smaller the problem 'too time consuming' and 'lack of relevant programs' was for the respondent. This finding suggests there are plenty of continuing education offerings for these respondents and that the personal and professional benefits of education are worth the time and effort taken to participate.

Four variables were found to be significant predictors of the respondents' attitudes toward mandatory continuing education. They were: (a) benefit in contribution to career advancement, (b) benefit in increasing general knowledge base, (c) problem in lack of relevant programs, and (d) years in nursing practice since basic nursing degree.

Conclusions

Based on the data collected from those nurses who responded and who represent a limited selection of nurses in Texas, the following conclusions may be drawn:

1. Texas nurses' attitudes toward mandatory continuing education are positive rather than negative, and they perceived improvement of general knowledge as a result of participation in mandatory continuing education, lending
empirical support to arguments in favor of mandatory continuing education.

2. Texas nurses prefer lecture/discussion over other forms of instruction, and an independent provider of continuing education courses is likely to be the provider of choice.

3. Professional associations provide the highest quality of mandatory continuing education courses, while cost is the greatest problem for nurses seeking to meet continuing education requirements.

4. An interest in the topic and the relevance of the course content to their practice area motivate nurses' choice of a continuing education program.

5. Nurses who have a positive attitude toward mandatory continuing education benefit most from mandatory continuing education through career advancement, performance improvement, increased awareness of professional issues, motivation to return to school, and motivation to continue learning beyond the required 20 hours.

6. Generally, Texas nurses believe health care to the public has been improved as a result of participation in mandatory continuing education.

7. Texas nurses believe that the Board of Nurse Examiners for the State of Texas' goals are met by participation in 20 hours of mandatory continuing education.
Implications

Implications from this study include:

1. Continuing education courses taught via the Internet might be a way for nurses to obtain the 20 contact hours needed for relicensure. As lecture/discussion was ranked as the most desirable type of instruction, courses on the Internet might provide interactional stimulation and thus be a possible type of educational format for Texas nurses seeking mandatory continuing educational opportunities.

2. Cost was ranked as an important barrier to participation in mandatory continuing education by this sample of nurses. Institutions such as hospitals and schools might devise ways to incorporate continuing education offerings into their budget to defray the costs to nurses and to keep their employees current.

3. Practice-based continuing educational offerings might be developed by continuing education providers, since application to practice areas was a motivator for choice of continuing education programs by this group of respondents.

Recommendations for Further Study

Recommendations for further study include:

1. Studies that explore the relationship between competency and mandatory continuing education in nursing.

2. Studies that explore the cost-benefit ratio to participants and providers of mandatory continuing education.
3. Studies that investigate learning styles, instructional design, and outcomes within the context of participation in mandatory continuing education.

4. Replication of the present study with a larger sample size.
APPENDIX A

PROTECTION OF HUMAN SUBJECTS APPROVAL LETTERS
Ms. Lyn Prater
School of Nursing
3700 Worth Street
Dallas, Texas 75246

Dear Ms. Prater:

Please be advised that the changes to the study entitled “Mandatory Continuing Education in Nursing: A Texas Perspective” have been reviewed and approved by the University Committee for Protection of Human Subjects in Research.

If any untoward events should occur during the conduct of this study, please advise the Committee. Many thanks for your cooperation.

Yours very sincerely,

William D. Hillis, M.D.
Chairman
University Committee for Protection of Human Subjects in Research

xc: Mr. Gary Carter, Research Administration
July 28, 1997

Llewellyn Prater
906 Gregory
Garland, TX 75041

Institutional Review Board for the Protection of Human Subjects In Research (IRB)
Re: IRB Application No. 97-151

Dear Ms. Prater:

I have reviewed your application to the University of North Texas Institutional Review Board for proposed project titled “Mandatory Continuing Education in Nursing: A Texas Perspective.” As designed, this project is exempt from review by the Institutional Review Board per Title 45, Code of Federal Regulations, Part 46.

If you later expand this study of decide to use different methods of data collection, the study may not be exempt and you must submit an application to the IRB for that study prior to involving those subjects. If you have questions, please contact me at 565-3940.

Sincerely,

Rollie Schafer
Chair, Institutional Review Board

RS: sb

cc: IRB Members
APPENDIX B

COVER LETTER TO QUESTIONNAIRE
Dear Registered Nurse:

I am a doctoral candidate at the University of North Texas and am investigating Texas nurses’ attitudes about mandatory continuing education. The issue of mandatory participation is a timely and crucial one for all of us, especially as it relates to our new mandate as included in the Texas Nurse Practice Act. Hopefully, the results of my dissertation will assist practitioners, educators, and legislators in evaluating nurses’ response to this legislation in Texas.

You are one of a number of nurses from Texas randomly selected for participation in this study. I am requesting that you take 15-20 minutes to complete the enclosed questionnaire, and return it to me in the envelope provided within the next few days. There is minimal risk to you by participating in this survey as your response will remain anonymous. The code number on the form is for data entry and analysis, and to assist in follow up on non-respondents. By returning your completed questionnaire, you are agreeing to participate in this survey.

Results of this study will be shared as group data only with the Texas Nurses Association and with the Board of Nurse Examiners for the State of Texas, along with educators throughout the country. Your views are crucial regarding the issue of mandatory continuing education, as well as to the success of my study. In addition, your participation will assist all of us who are involved in planning and evaluating continuing education. If you would like a copy of the study results, please mail the enclosed postcard with your name and address separately from the questionnaire. I will send you the results when the study is complete.

If you have any questions regarding this study, please do not hesitate to contact me at Baylor University School of Nursing, 3700 Worth Street, Dallas, Texas 75246. The telephone number is (214) 820-4695. You may also contact my committee chairperson, Dr. Ron Newsom, College of Education at the University of North Texas, P. O. Box 13857, Denton, Texas 76203. His telephone number is (940) 565-2722. Inquiries regarding the nature of the research, your rights as a subject, or any other aspect of the research as it relates to your participation as a subject, can be directed to Baylor’s University Committee for Protection of Human Subjects in Research. The chairman is Dr. William Hillis, Vice President for Student Life, P. O. Box 97016, Waco, Texas 76798. Dr. Hillis’ telephone number is (817) 755-1314.

Thank you for your participation in this study.

Sincerely,

Lyn S. Prater, RN, Assistant Professor,
Baylor University School of Nursing
Doctoral Candidate
Adult and Continuing Education
The University of North Texas
NURSING CONTINUING EDUCATION ATTITUDE SURVEY

This study about Texas nurses' attitudes regarding mandatory continuing education is aimed at determining how mandatory participation in continuing education has affected nurses' attitudes. It should take about 20 minutes to complete. Please answer all questions candidly by indicating your response in the space provided.

This first part of the questionnaire relates to your attitude towards mandatory continuing education. Please indicate your answer by circling the response most indicative of your attitude toward mandatory continuing education since completing the most recent two year cycle of 20 hours of continuing education. Please circle one number only.

1. I have always voluntarily participated in continuing education activities.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

2. Mandatory continuing education may "weed out" some undesirables in our profession.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

3. Mandatory continuing education is needed by most nurses in the profession to encourage them to continue learning.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

4. I am opposed to mandating participation in continuing education activities.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

5. Mandatory continuing education results in less learning than voluntary participation.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

6. Mandatory continuing education is necessary for the majority in our profession.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

7. Mandatory continuing education is an invasion of personal rights and privacy.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
   DISAGREE  NEUTRAL  DISAGREE  NEUTRAL
   AGREE  AGREE

8. Mandatory continuing education is insulting and degrading to nurses and the profession.

   STRONGLY  1-2-3-4-5-6-7-8-9-10  STRONGLY
9. Mandatory continuing education implies that nurses are not responsible for meeting their own learning needs.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

10. There are not enough quality continuing education opportunities to make mandatory continuing education practical or feasible.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

11. The advantages of mandatory continuing education to the patient and profession outweigh the disadvantages to the nurse.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

12. Mandatory continuing education is an attempt to ensure quality health care.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

13. Continuing education is a waste of time, whether mandatory or not.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

14. Providers of mandatory continuing education have more to gain from it than the nurses who attend.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

15. Continuing education is a waste of money.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

16. Mandatory continuing education upgrades the availability and/or the quality of continuing education offerings.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL

17. Participation in continuing education by nurses is reassuring to patients and health care consumers.

STRONGLY 1—2—3—4—5—6—7—8—9—10
DISAGREE NEUTRAL
18. Mandatory continuing education indicates to the health care consumer that nurses are concerned about quality patient care.

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

19. Mandatory continuing education is good for nursing’s professional image.

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

20. No one should be so opposed to mandatory continuing education to forfeit licensure by not complying with the law.

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

21. Participation in mandatory continuing education has improved your performance in psychomotor nursing skills (physical skills and procedures).

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

Briefly explain your answer.

22. Participation in mandatory continuing education has improved your performance in cognitive nursing skills (understanding information and application of knowledge).

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

Briefly explain your answer.

23. Participation in mandatory continuing education has improved your performance in affective nursing skills (internalizing new feelings or values).

STRONGLY
DISAGREE
1—2—3—4—5—6—7—8—9—10
NEUTRAL
AGREE

Briefly explain your answer.
24. Health care to the public has been improved as a result of your participation in mandatory continuing education activities.

STRONGLY 1—2—3—4—5—6—7—8—9—10 STRONGLY
DISAGREE NEUTRAL AGREE

Briefly explain your answer.

Questions 25-32 relate to your participation in continuing education programs during the last biennium of your re-certification cycle.

25. Total number of contact hours spent in continuing education beyond the 20 hours required for re-licensure. ____________________________

26. Approximately how many hours did you take from each of the following continuing education providers in collecting your 20 hours of mandatory continuing education?

- Professional Association
- Community College
- University
- Hospital other than your employer
- Your employer
- Home study
- Independent provider
- Other (please specify)

27. During your last 2-year re-licensing cycle, please indicate which response best describes the time period during which you acquired your mandatory continuing education 20 hour requirement.

- (1) Early in the cycle, in the months just following license renewal.
- (2) Throughout the cycle, during the entire period from one renewal date to another.
- (3) Late in the cycle, in the months just preceding license expiration.
- (4) Late in the cycle, including the time after license expiration.
- (5) Other (please specify)
28. Based on your experience with mandatory continuing education, please rate the type of instruction as it relates to your learning needs and style.

<table>
<thead>
<tr>
<th>Type of Instruction</th>
<th>least suited</th>
<th>best suited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture/Discussion</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Small group seminar format</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Independent study</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Courses with a clinical component</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
</tbody>
</table>

29. Based on your experience with mandatory continuing education, please rate the quality of providers you have encountered.

<table>
<thead>
<tr>
<th>Provider</th>
<th>lowest quality</th>
<th>highest quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Association</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Community College</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Independent continuing education provider</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Hospital other than your employer</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Your employer</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Home Study</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
</tbody>
</table>

30. Based on your experience with mandatory continuing education, please rate the following in terms of benefits to you as a practicing nurse.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>least beneficial</th>
<th>most beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved my performance in practice</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Contributed to my career advancement</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Provided opportunity to network with colleagues</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Increased my awareness of professional issues</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
<tr>
<td>Increased my general knowledge base</td>
<td>1—2—3—4—5</td>
<td></td>
</tr>
</tbody>
</table>
Motivated me to continue learning beyond the hours required for re-licensure
Motivated me to return to school
Expanded my professional network

31. Based on your experience with mandatory continuing education, please rate the problems you have encountered

<table>
<thead>
<tr>
<th>Problem</th>
<th>least beneficial</th>
<th>most beneficial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too time consuming</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Too costly</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Lack of quality programs</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Lack of accessible programs</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Lack of relevant programs</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Lack of employer support</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
</tbody>
</table>

32. Based on your experience, please rate the factors that determine your choice of a continuing education program.

<table>
<thead>
<tr>
<th>Factor</th>
<th>least important</th>
<th>most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance of course content to my practice area</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Reputation of the provider</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Reputation of the faculty</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Interest in the topic</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Cost of the program</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Convenient location</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Convenient day and time</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
<tr>
<td>Type of instructional format</td>
<td>1---------2-------3-------4--------5</td>
<td></td>
</tr>
</tbody>
</table>
33. Year first licensed in the state of Texas.

34. Current employment status:
   
   (1) ___ Employed full-time in nursing
   (2) ___ Employed part-time in nursing
   (3) ___ Employed full-time, not in nursing
   (4) ___ Employed part-time, not in nursing
   (5) ___ Not employed at this time

35. Current Job Position:
   
   (1) ___ Staff Nurse
   (2) ___ Head Nurse
   (3) ___ Supervisor
   (4) ___ Advanced Nurse Practitioner
   (5) ___ Faculty in School of Nursing
   (6) ___ Administrator
   (7) ___ Other ___________________________
   (8) ___ Not currently employed

36. Place of Employment:
   
   (1) ___ Hospital
   (2) ___ Home Care Agency
   (3) ___ Long Term Care Facility
   (4) ___ School of Nursing
   (5) ___ Other ___________________________
   (6) ___ Not Applicable

37. Current Clinical Specialty:
   
   (1) ___ Community nursing
   (2) ___ Critical Care nursing
   (3) ___ General Medical-Surgical nursing
   (4) ___ Geriatric nursing
   (5) ___ Obstetrical nursing
   (6) ___ Pediatric nursing
   (7) ___ Psychiatric nursing
   (8) ___ Other ___________________________

38. Do you hold certification in any specialty?  (1)Yes ___  (2)No ___

   If yes, please name ___________________________
39. Length of time in present position:
   (1) ___ Less than one year
   (2) ___ 1-3 years
   (3) ___ 4-6 years
   (4) ___ 7-10 years
   (5) ___ Over 10 years

40. Basic nursing preparation:
   (1) ___ Diploma (hospital)
   (2) ___ Associate degree
   (3) ___ Baccalaureate degree

41. Highest degree held:
   (1) ___ Associate degree
   (2) ___ Baccalaureate degree in nursing
   (3) ___ Baccalaureate degree in another field
   (4) ___ Masters in nursing
   (5) ___ Masters in another field
   (6) ___ Doctorate in nursing
   (7) ___ Doctorate in another field
   (8) ___ Do not hold a degree

42. Presently working towards a degree (1) ___ Yes (2) ___ No

43. Marital status:
   (1) ___ Never been married
   (2) ___ Married
   (3) ___ Separated
   (4) ___ Divorced
   (5) ___ Widowed

44. Gender: (1) ___ Female (2) ___ Male

45. Your age: ________

46. Number of years you have worked in nursing since completing basic nursing preparation. ________

The enclosed postcard is to be mailed separately if you wish to receive a summary of the findings of this study.

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY!
APPENDIX D

ATTITUDE STATEMENTS
## ATTITUDE SCALE ITEMS

### ATTITUDE STATEMENT

1. I have always voluntarily participated in continuing education activities.  
   **Direction of Item:** Positive

2. Mandatory continuing education may "weed out" some undesirables in our profession.  
   **Direction of Item:** Positive

3. Mandatory continuing education is needed by most nurses in the profession to encourage them to continue learning.  
   **Direction of Item:** Positive

4. I am opposed to mandating participation in continuing education activities.  
   **Direction of Item:** Negative

5. Mandatory continuing education results in less learning than voluntary participation.  
   **Direction of Item:** Negative

6. Mandatory continuing education is necessary for the majority in our profession.  
   **Direction of Item:** Positive

7. Mandatory continuing education is an invasion of personal rights and privacy.  
   **Direction of Item:** Negative

8. Mandatory continuing education is insulting and degrading to nurses and the profession.  
   **Direction of Item:** Negative

9. Mandatory continuing education implies that nurses are not responsible for meeting their own learning needs.  
   **Direction of Item:** Negative

10. There are not enough quality continuing education opportunities to make mandatory continuing education feasible  
    **Direction of Item:** Negative
**ATTITUDE STATEMENT**

<p>| | |</p>
<table>
<thead>
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<tr>
<td>11. The advantages of mandatory continuing education to the patient and profession outweigh the disadvantages to the nurse.</td>
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<tr>
<td>12. Mandatory continuing education is one attempt to insure quality health care.</td>
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<tr>
<td>13. Continuing education is a waste of time, whether mandatory or not.</td>
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<td>14. Providers of mandatory continuing education have more to gain from it than the nurses who attend.</td>
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<tr>
<td>15. Continuing education is a waste of money.</td>
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<tr>
<td>16. Mandatory continuing education upgrades the availability and/or the quality of continuing education offerings.</td>
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<tr>
<td>17. Participation in continuing education by nurses is reassuring to patients and health care consumers.</td>
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<td>18. Mandatory continuing education indicates to the health care consumer that nurses are concerned about quality patient care.</td>
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<td>19. Mandatory continuing education is good for nursing's professional image.</td>
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<td>20. No one should be so opposed to mandatory continuing education to forfeit licensure by not complying with the law.</td>
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APPENDIX E

FREQUENCY DISTRIBUTION OF ATTITUDE SCALE ITEMS
Appendix E

Frequency Distribution of Attitude Scale Items

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SD-Standard Deviation
REFERENCES


English, H. B., & English, A. V. (1958). *A comprehensive dictionary of psychological and...


Texas Nurses Association. (1994). Nurse Practice Act


